

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004886**Date Inspected:** 05-Dec-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower & OBG**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

Heavy Equipment Shop Bay 1:

The QA Inspector randomly observed 2 ZPMC welder Liu Xiao You ID 207745, utilizing the Submerged Arc Welding (SAW) Process in the 1G (Flat Groove) Position with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2221-B-U3c-S-2, to weld a butt splice at Weld Joint (WJ) Numbers NSD1-SA180C/E-9B on Skin Plate D4 Lift 1 between piece marks p46A and p15. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly observed weld parameters and recorded them as follows: 665 amps, 31.9 volts with a travel speed of 560 millimeters (mm) per minute. The weld parameters appeared to comply with contract requirements.

The QA Inspector performed a Final Visual Inspection (VT) on the fillet welds attaching the longitudinal stiffeners to Skin Plate E South Lift 2. The QA Inspector randomly observed that QA Final Magnetic Particle Testing (MT) and Ultrasonic Testing (UT) Inspections had not been performed. There appeared to be no indications and the QA Inspector accepted the fillet welds on Skin Plate E South.

The QA Inspector performed a Final VT on the fillet welds attaching the longitudinal stiffeners to Skin Plate B Lift 2 South. The QA Inspector randomly observed that QA Final Magnetic Particle Testing (MT) and Ultrasonic Testing (UT) Inspections had not been performed. There appeared to be no indications and the QA Inspector

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accepted the fillet welds on Skin Plate B South.

Heavy Equipment Shop Bay 2:

The QA Inspector performed a Final Visual Inspection (VT) on the fillet welds, after pick ups, attaching the longitudinal stiffeners to Skin Plate A Lift 2. The QA Inspector randomly observed that QA Final Magnetic Particle Testing (MT) and Ultrasonic Testing (UT) Inspections had been accepted. There appeared to be no indications and the QA Inspector accepted the fillet welds on Skin Plate A. The QA Inspector observed ZPMC QC attach Green Tag 1077 to Skin PLate A. The attached photograph provides additional detail.

The QA Inspector randomly observed 2 ZPMC welders ID's 040634 and 056975, utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-B-U3c-S-2, to weld a butt splice at WJ WSD1-SA77D/E-17, 26B, 29, WSD1-SA77E/E-1B, 4B, 8 and 10B on Skin Plate C Lift 1 between piece marks p602+p1652 and p1568+1563. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly observed weld parameters and recorded them as follows: 665 amps, 31.9 volts with a travel speed of 560 millimeters (mm) per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed 2 ZPMC welder Ge Guo Chang ID 053469, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-P-2312-TC-P5, to tack weld a longitudinal stiffener to Skin Plate C (N) Lift 2, at WJ NSD1-SA17A/G-2/5 and 14B. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

Heavy Equipment Shop Bay 3:

The QA Inspector performed a random Final (VT) of all fillet welds attaching the U-Ribs to Deck Plate DP412-001 Yellow Tag 001769 (7BE-DP412-001). There appeared to be no indications and the QA Inspector accepted the welds on the above listed Deck Plates.



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Summary of Conversations:

As noted in the above body of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Joshua Ishibashi, 13764710411, who represents the Office of Structural Materials for your project.

Inspected By:	Franco,Charlie
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Quality Assurance Inspector

Reviewed By:	Wright,Mark
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QA Reviewer
